

WHAT IS CLAIMED IS:

1. An accumulating element module comprising:

a plurality of accumulating elements arranged in a row, wherein longitudinal axes of each accumulating element are parallel to one another, wherein each accumulating element is cylindrical;

a positive pole terminal and a negative pole terminal are provided at a first end of each accumulating element;

an elastic insulating connecting member which connects second ends of accumulating elements to one another;

a temperature detector which detects a relatively high temperature of each accumulating element is provided in each accumulating element,

wherein the insulating connecting member includes a plurality of caps and connectors,

wherein each connector connects adjacent caps to each other,

wherein each cap includes a cylindrical portion and an end wall, the cylindrical portion being adhered to an outer peripheral surface of the second end of each accumulating element and connected to an adjacent cylindrical portion by one of the plurality of connectors, the end wall being integral with the cylindrical portion and opposite to a face of the second end of each accumulating element; and

a deformation-resistant, band-shaped, temperature sensing member is inserted through each of the caps from a first cap of the plurality of caps located at a first end of the accumulating module toward a final cap of the plurality of caps located at a second end of the accumulating module opposite the first end, and passed through a space between inner surfaces of the end walls of the caps and the faces of the second ends of the accumulating elements and through the connectors, and

wherein the temperature sensing member includes:

a plurality of the temperature detectors each disposed at the face of the second end of each accumulating element;

a plurality of first metal plates secured at opposite ends to adjacent temperature detectors and electrically connecting adjacent temperature detectors to each other;

two pulling-out second metal plates each secured at one end to each temperature detector located at the first and second ends of the accumulating element module; and

an insulating coating layer extending from one of the second metal plates to the other second metal plate covers both the second metal plates, the temperature detectors, and the first metal plates.

2. The accumulating element module according to claim 1, wherein each cap includes a pair of opposing slits formed therein through which the temperature sensing member passes.

3. The accumulating element module according to claim 1, wherein each connector includes a first connecting portion which connects ends of adjacent large diameter portions of cylindrical portions of respectively adjacent caps.

4. The accumulating element module according to claim 3, wherein each accumulating element further comprises a small diameter annular projection protruding from an inner peripheral edge of an annular stepped face.

5. The accumulating element module according to claim 4, wherein an annular portion connects the small and large diameter portions.

6. The accumulating element module according to claim 5, wherein the first connecting portion and annular portion lie on a common plane.

7. The accumulating element module according to claim 6, wherein a pair of second connecting portions connect the first connecting portion and annular portion.

8. The accumulating element module according to claim 7, wherein the first connecting portion, portions of the annular portion, and the second portion define a groove.

9. The accumulating element module according to claim 7, wherein each cap includes a pair of opposing slits formed therein through which the temperature sensing member passes, wherein the groove has a width equal to a length of each slit.